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# CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM AT FERMILAB

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# BASIS FOR HEALTH STANDARDS

- AIHA-ACGIH
- OSHA
- DOE
- INTERNAL POLICY

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# ELEMENTS OF HEALTH STANDARDS

- BASELINE INVENTORY AND SAMPLING
- HAZARD ASSESSMENT
- EXPOSURE MONITORING
- EXPOSURE REDUCTION
- MEDICAL SURVEILLANCE
- RECORDKEEPING

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# ELEMENTS OF HEALTH STANDARDS (cont.)

- EMPLOYEE TRAINING
- SUBCONTRACTOR HAZARD  
COMMUNICATION
- PROGRAM EVALUATION

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# BASELINE INVENTORY AND SAMPLING

- DETERMINE OPERATIONS -TARGET SET-UP/DISASSEMBLY; NON-SPARKING TOOLS; Ag-Be WIRE
- IDENTIFY INDIVIDUALS-DEFINE Be WORKER
- EXPOSURE ASSESSMENTS
- MONITORING

# BASELINE INVENTORY AND SAMPLING (cont.)

- INVENTORY-INCLUDES 10K “ARTICLES”; 3.8 K POUNDS; TARGETS; NON-SPARKING TOOLS; Be WIRE;
- SAMPLE RANGE- 1989, 78 POTENTIAL WORKERS; 0.0001 - 0.0005 mg/ M3
- EXPOSURE DURATION- 0.5-80 HOURS
- EXPOSURE FREQUENCY-O,W,M,Y

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# HAZARD ASSESSMENT

- DEFINE HAZARD
- ACTION LEVEL (AIR)=0.0002 mg/M<sup>3</sup>
- ACTION LEVEL (SURFACE)=0.025 mg/ft<sup>2</sup>
- PERMISSIBLE EXPOSURE LEVEL=0.002 mg/M<sup>3</sup>
- BERYLLIUM WORKER =WORKER>AL.

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# BERYLLIUM WORKER

- HISTORICAL-WORK ACTIVITY ANALYSIS FORM (WAAF)-350 WORKERS, REGARDLESS OF EXPOSURE LEVELS
- 1998-Be WORKER AS DEFINED IN PROGRAM-2 WORKERS



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# EXPOSURE REDUCTION AND MINIMIZATION

- ESTABLISH ADMINISTRATIVE ACTION LEVELS
  - 0.0002 mg/M<sup>3</sup> (10% TLV)
  - 0.25 mg/ft<sup>2</sup>
- ENGINEERING CONTROLS
- WORK CONTROL PERMIT

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# TRAINING

- BERYLLIUM WORKER-INITIAL AND ANNUAL
- AWARENESS - WASTE HANDLERS, EMERGENCY PERSONNEL, IH, SUPS.
- CONTENTS- SAFE WORK PRACTICES, HANDLING, CONTROL, PPE, WASTE, MEDICAL, DECONTAMINATION

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# HAZARD CONTROL

- INVENTORY OF MATERIALS, OPERATIONS, LOCATIONS
- STORAGE -CABINETS, SEALED CONTAINERS, SECURED
- LABELING
- HAZARD ASSESSMENT AND CONTROL-WORK CONTROL PERMIT

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# BERYLLIUM WORK CONTROL PERMIT

- ANY MACHINING
- HANDLING PIECES WITH SURFACE  
OXIDATION > AL. SURFACE
- MEDICAL
- TRAINING
- PRE-JOB CONDITIONS

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# PROGRAM IMPROVEMENTS

- TREAT HEALTH HAZARDS AS PART OF COMPREHENSIVE S&H PROGRAM
- MONITORING, EVALUATION, TRAINING, MEDICAL, RECORDS
- SUBCONTRACTOR NOTIFICATION AND CONTRACT DOCUMENTS